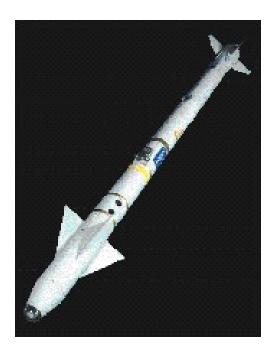


# **Selected Acquisition Report (SAR)**

RCS: DD-A&T(Q&A)823-581



AIM-9X BLOCK I
As of December 31, 2011

Defense Acquisition Management Information Retrieval (DAMIR)

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#### **Program Information**

#### Designation And Nomenclature (Popular Name)

AIM-9X Air-to-Air Missile Block I (AIM-9X)

#### **DoD Component**

Navy

#### **Joint Participants**

Air Force

#### **Responsible Office**

#### **Responsible Office**

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 301-757-7311

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#### References

#### **SAR Baseline (Production Estimate)**

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated May 15, 2004

#### Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated May 8, 2010

#### Mission and Description

The AIM-9X Sidewinder is a 5th generation Infra-Red (IR) Air-to-Air missile that complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority is essential to the warfighter and includes first-shot, first-kill opportunity against an enemy employing IR countermeasures. Improvements extend the AIM-9X's capability into the Beyond Visual Range arena resulting in a more effective balance with AMRAAM. AIM-9X provides a kill region before a fighter-bogey merge, where AMRAAM capability is not achievable at high off boresight angles or may be denied by electronic attack. The AIM-9X program has Foreign Military Sales (FMS) agreements with a number of International partners to procure both tactical and training missiles.

#### **Executive Summary**

This is the final SAR submission for the AIM-9X Block I program, because the program is 90% or more expended and 90% or more delivered.

The AIM-9X Block I Program continues to meet warfighter requirements and expectations. The production and sustainment are executing as planned. Further, the contractor has consecutively delivered ahead of the contractual delivery schedule.

Based on direction from the United States Navy and United States Air Force requirements offices, this Block I Final SAR adjusts Block I program of record quantities from 10,097 to 3,097, which is based on no future production contracts for Block I missiles after Lot 10 deliveries are complete. The approval of Block II to enter Low Rate Initial Production ends new production for Block I missiles, and shifts future production to procure Block II missiles. Therefore, the budget submissions starting in FY 2011 have been updated to reflect production dollars having been transferred from the Block I to the Block II program. The Block I quantity reduction results in a critical Nunn-McCurdy breach. A Block I program deviation report (PDR) has been submitted. This final Block I SAR is submitted to officially document the end of future Block I production contracts.

There are no significant software-related issues with this program at this time.

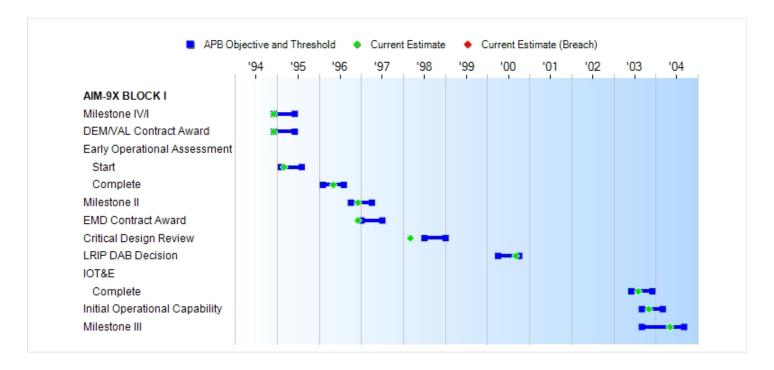
#### **Threshold Breaches**

APB Breaches							
Schedule							
Performance							
Cost	RDT&E						
	Procurement						
	MILCON						
	Acq O&M						
<b>Unit Cost</b>	PAUC	V					
	APUC	$\checkmark$					
Nunn-Mc	Curdy Breach	es					
<b>Current UCR E</b>	Baseline						
	PAUC	Critical					
	APUC	None					
Original UCR I	Baseline						
	PAUC	Critical					
	APUC	None					

#### **Explanation of Breach**

The AIM-9X Block I (Block I) program will deviate from its current Acquisition Program Baseline (APB), dated May 8, 2010 for Average Procurement Unit Cost (APUC) and Program Acquisition Unit Cost (PAUC) metrics. This deviation results from truncating the Block I APB program of record production missile quantities from 10,097 to 3,097 based on direction from the United States Navy and United States Air Force requirements offices, which is based on the termination of future Block I production. If the Block I Program had not been truncated (to shift production to Block II via a separate APB), there would not have been a Nunn-McCurdy breach.

#### **Schedule**



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone IV/I	DEC 1994	DEC 1994	JUN 1995	DEC 1994
DEM/VAL Contract Award	DEC 1994	DEC 1994	JUN 1995	DEC 1994
Early Operational Assessment				
Start	FEB 1995	FEB 1995	AUG 1995	MAR 1995
Complete	FEB 1996	FEB 1996	AUG 1996	MAY 1996
Milestone II	OCT 1996	OCT 1996	APR 1997	DEC 1996
EMD Contract Award	JAN 1997	JAN 1997	JUL 1997	DEC 1996
Critical Design Review	JUL 1998	JUL 1998	JAN 1999	MAR 1998
LRIP DAB Decision	APR 2000	APR 2000	OCT 2000	SEP 2000
IOT&E				
Complete	JUN 2003	JUN 2003	DEC 2003	AUG 2003
Initial Operational Capability	SEP 2003	SEP 2003	MAR 2004	NOV 2003
Milestone III	SEP 2003	SEP 2003	SEP 2004	MAY 2004

# **Acronyms And Abbreviations**

DAB - Defense Acquisition Board

DEM/VAL - Demonstration and Validation

EMD - Engineering and Manufacturing Development

IOT&E - Initial Operational Test and Evaluation

LRIP - Low Rate Initial Production

# **Change Explanations**

None

#### **Performance**

Characteristics	SAR Baseline Prod Est	Proc	ent APB duction e/Threshold	Demonstrated Performance	Current Estimate
Day/Night Capability	Yes	Yes	Yes	Yes	Yes
Aircraft Interface					
Missile Weight (lbs)	<.or.= 192	<.or.= 192	<.or.= 210	185.6	<.or.= 192
Missile Size					
Length (in.)	<.or.= 115	<.or.= 115	<.or.= 123	119	<.or.= 115
Box Size (in.)	<.or.= 12.5 x 12.5	<.or.= 12.5 x 12.5	<.or.= 12.5 x 12.5	<.or.= 12.5 x 12.5	<.or.= 12.5 x 12.5
Diameter (in.)	5	5	<.or.= 7	5	5
Digital Interface	Employ from current fighter aircraft without digital interface	Employ from current fighter aircraft without digital interface	Employ from future/current fighter aircraft with digital interface	Employ from current fighter aircraft without digital interface	Employ from current fighter aircraft without digital interface
Off Boresight Capability					
Cueing/Verification	Interface to all current and planned aircraft systems which provide accurate Line of Site to target	Interface to all current and planned aircraft systems which provide accurate Line of Site to target	Interface with current/plann ed aircraft radar systems and planned Helmet Mounted Cueing System (HMCS)	Interface to all current and planned aircraft systems which provide accurate Line of Site to target	Interface to all current and planned aircraft systems which provide accurate Line of Site to target
Captive Carry Reliability (hr.)	>.or.= 900 MTBCF	>.or.= 900 MTBCF	>.or.= 300 MTBCF	1507	>.or.= 900 MTBCF
Detect Non-Operational Missile (BIT) All Components	>.or.= 0.80	>.or.= 0.80	>.or.= 0.60	.8	>.or.= 0.80
Detect Non-Operational Missile (BIT-able Components)	>.or.= 0.95	>.or.= 0.95	>.or.= 0.90	.95	>.or.= 0.95
False Alarm Rate	<.or.=.01	<.or.=.01	<.or.= 0.01	.01	<.or.=.01
BIT Time (sec)	<.or.=20	<.or.=20	<.or.=20	15	<.or.=20

Requirements Source: Operational Requirements Document (ORD) #628-71-04 dated March 19, 2003

**Acronyms And Abbreviations** 

BIT - Built-In-Test hr. - hours in. - inches lbs - pounds MTBCF - Mean Time Between Critical Failure sec - seconds

### **Change Explanations**

None

Classified Performance information is provided in the classified annex to this submission.

# **Track To Budget**

RDT&E				
APPN 1319	BA 07	PE 0207161N	(Navy)	
	Project 0457	Tactical Air Intercept/AIM-9X	(Shared)	(Sunk)
APPN 3600	BA 07	PE 0207161F	(Air Force)	
	Project 4132	Tactical Air Intercept/AIM-9X	(Shared)	(Sunk)
APPN 0400	BA 07	PE 0603715D	(DoD)	
	Project 0456	Tactical Air Intercept/AIM-9X		(Sunk)
Procurement				
APPN 1507	BA 02	PE 0204162N	(Navy)	
	ICN 2209	AIM-9X Sidewinder	(Shared)	(Sunk)
APPN 1507	BA 02	PE 0206138M	(Navy)	
	ICN 2209 USMC funding rece	AIM-9X Sidewinder eived as WPN	(Shared)	(Sunk)
APPN 3020	BA 02	PE 0207161F	(Air Force)	
	ICN M09HAI	AIM-9X Sidewinder		(Sunk)

#### **Cost and Funding**

#### **Cost Summary**

#### **Total Acquisition Cost and Quantity**

	В	Y1997 \$M		BY1997 \$M	TY \$M			
Appropriation	SAR Baseline Prod Est	Current Produc Objective/T	ction	Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate	
RDT&E	531.4	623.5	685.9	546.7	553.5	656.5	561.2	
Procurement	1932.6	2232.7	2456.0	775.3	2679.4	3010.3	911.6	
Flyaway	1677.2			748.9	2335.8		881.7	
Recurring	1582.5			703.1	2214.8		824.4	
Non Recurring	94.7			45.8	121.0		57.3	
Support	255.4			26.4	343.6		29.9	
Other Support	216.3			8.3	297.3		9.2	
Initial Spares	39.1			18.1	46.3		20.7	
MILCON	0.0	0.0		0.0	0.0	0.0	0.0	
Acq O&M	0.0	0.0		0.0	0.0	0.0	0.0	
Total	2464.0	2856.2	N/A	1322.0	3232.9	3666.8	1472.8	

Confidence Level For the Current Acquisition Program Baseline (APB) Cost 50% - The current APB cost estimate provided sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule and programmatic risk and external interference. It was consistent with average resource expenditures on historical efforts of similar size, scope, and complexity and represents a notional 50% confidence level.

Funding for Seek Eagle is not included in the current estimate above and is managed at Eglin Air Force Base (AFB), FL. The Seek Eagle Office is the flight clearance agency for the Air Force.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	49	45	45
Procurement	10000	10097	3097
Total	10049	10142	3142

# **Cost and Funding**

# **Funding Summary**

# Appropriation and Quantity Summary FY2013 President's Budget / December 2011 SAR (TY\$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	561.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	561.2
Procurement	911.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	911.6
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2013 Total	1472.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1472.8
PB 2012 Total	1687.8	155.0	155.2	156.7	159.2	162.6	151.6	1126.5	3754.6
Delta	-215.0	-155.0	-155.2	-156.7	-159.2	-162.6	-151.6	-1126.5	-2281.8

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	45	0	0	0	0	0	0	0	0	45
Production	0	3097	0	0	0	0	0	0	0	3097
PB 2013 Total	45	3097	0	0	0	0	0	0	0	3142
PB 2012 Total	45	3430	372	385	425	428	419	434	4204	10142
Delta	0	-333	-372	-385	-425	-428	-419	-434	-4204	-7000

# **Cost and Funding**

# **Annual Funding By Appropriation**

**Annual Funding TY\$** 

0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1995							46.4
Subtotal							46.4

Annual Funding BY\$
0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	Fivawav	Non End Item Recurring Flyaway BY 1997 \$M	Non Recurring Flyaway BY 1997 \$M	Total Flyaway BY 1997 \$M	Total Support BY 1997 \$M	Total Program BY 1997 \$M
1995							47.6
Subtotal							47.6

Annual Funding TY\$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1996							28.1
1997							44.6
1998							55.1
1999							57.0
2000							39.5
2001							23.8
2002							17.2
2003							2.8
2004							0.9
2005							
2006							1.5
2007							1.2
2008							4.3
2009							3.1
2010							2.2
Subtotal	23						281.3

Annual Funding BY\$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	Flyaway	Non End Item Recurring Flyaway BY 1997 \$M	Non Recurring Flyaway BY 1997 \$M	Total Flyaway BY 1997 \$M	Total Support BY 1997 \$M	Total Program BY 1997 \$M
1996							28.3
1997							44.4
1998							54.4
1999							55.6
2000							38.0
2001							22.6
2002							16.2
2003							2.6
2004							0.8
2005							
2006							1.3
2007							1.0
2008							3.5
2009							2.5
2010							1.7
Subtotal	23						272.9

Annual Funding TY\$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1996							18.8
1997							29.1
1998							50.9
1999							49.0
2000							39.4
2001							21.7
2002							6.8
2003							2.8
2004							0.3
2005							0.2
2006							4.6
2007							5.5
2008							2.2
2009							0.1
2010							2.1
Subtotal	22						233.5

Annual Funding BY\$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 \$M	Non End Item Recurring Flyaway BY 1997 \$M	Non Recurring Flyaway BY 1997 \$M	Total Flyaway BY 1997 \$M	Total Support BY 1997 \$M	Total Program BY 1997 \$M
1996							18.9
1997							28.9
1998							50.3
1999							47.9
2000							38.0
2001							20.6
2002							6.4
2003							2.6
2004							0.3
2005							0.2
2006							3.9
2007							4.6
2008							1.8
2009							0.1
2010							1.7
Subtotal	22						226.2

Annual Funding TY\$
1507 | Procurement | Weapons Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2001	63	25.2		0.3	25.5	2.1	27.6
2002	105	23.3		0.1	23.4	1.5	24.9
2003	284	51.5		0.1	51.6	1.8	53.4
2004	103	24.7		0.1	24.8	1.9	26.7
2005	135	30.6		0.1	30.7	0.5	31.2
2006	159	36.9		0.1	37.0	0.1	37.1
2007	174	40.0		0.1	40.1	0.1	40.2
2008	170	50.3		3.0	53.3	0.1	53.4
2009	114	47.0		11.2	58.2	0.5	58.7
2010	45	33.1		9.2	42.3	1.1	43.4
Subtotal	1352	362.6		24.3	386.9	9.7	396.6

Annual Funding BY\$
1507 | Procurement | Weapons Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 \$M	Non End Item Recurring Flyaway BY 1997 \$M	Non Recurring Flyaway BY 1997 \$M	Total Flyaway BY 1997 \$M	Total Support BY 1997 \$M	Total Program BY 1997 \$M
2001	63	23.6		0.3	23.9	2.0	25.9
2002	105	21.6		0.1	21.7	1.4	23.1
2003	284	46.8		0.1	46.9	1.6	48.5
2004	103	21.8		0.1	21.9	1.7	23.6
2005	135	26.3		0.1	26.4	0.4	26.8
2006	159	30.9		0.1	31.0	0.1	31.1
2007	174	32.8		0.1	32.9	0.1	33.0
2008	170	40.6		2.4	43.0	0.1	43.1
2009	114	37.4		8.9	46.3	0.4	46.7
2010	45	25.9		7.2	33.1	0.9	34.0
Subtotal	1352	307.7		19.4	327.1	8.7	335.8

Annual Funding TY\$
3020 | Procurement | Missile Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2001	67	25.8		0.6	26.4	2.3	28.7
2002	138	30.7			30.7	3.5	34.2
2003	286	53.1			53.1	2.6	55.7
2004	256	52.2			52.2	2.8	55.0
2005	248	52.3		0.1	52.4	1.7	54.1
2006	196	44.3		0.1	44.4	1.4	45.8
2007	183	43.6		0.1	43.7	1.5	45.2
2008	149	48.4		4.0	52.4	1.5	53.9
2009	157	64.0		11.2	75.2	1.2	76.4
2010	65	47.4		16.9	64.3	1.7	66.0
Subtotal	1745	461.8		33.0	494.8	20.2	515.0

Annual Funding BY\$

#### 3020 | Procurement | Missile Procurement, Air Force

Fiscal Year	Quantity	Flyaway	Non End Item Recurring Flyaway BY 1997 \$M	Non Recurring Flyaway BY 1997 \$M	Total Flyaway BY 1997 \$M	Total Support BY 1997 \$M	Total Program BY 1997 \$M
2001	67	24.3		0.6	24.9	2.2	27.1
2002	138	28.5			28.5	3.2	31.7
2003	286	48.7			48.7	2.4	51.1
2004	256	46.8			46.8	2.5	49.3
2005	248	45.6		0.1	45.7	1.5	47.2
2006	196	37.6		0.1	37.7	1.1	38.8
2007	183	36.1		0.1	36.2	1.2	37.4
2008	149	39.3		3.3	42.6	1.2	43.8
2009	157	51.2		9.0	60.2	1.0	61.2
2010	65	37.3		13.2	50.5	1.4	51.9
Subtotal	1745	395.4		26.4	421.8	17.7	439.5

#### **Low Rate Initial Production**

	Initial LRIP Decision	Current Total LRIP
Approval Date	12/19/1996	8/14/2003
<b>Approved Quantity</b>	1000	1302
Reference	ADM	ADM
Start Year	2001	2001
End Year	2003	2004

The Low Rate Initial Production (LRIP) quantities were approved at Milestone II on Acquisition Decision Memorandum (ADM) dated December 19, 1996. Permission to exceed the 10% planned production quantity was granted on April 10, 2003 by Assistant Secretary of the Navy, Research, Development and Acquisition (ASN (RD&A)) in order to maintain production line stability.

# **Foreign Military Sales**

Country	Date of Sale	Quantity	Total Cost \$M	Memo
South Korea	6/28/2010	16	5.4	Last AIM-9X Block I sale.
South Korea	6/25/2010	67	28.7	
Australia	6/15/2009	4	0.9	Contract value also includes 16 Special Air Training Missiles (NATMs).
Saudi Arabia	6/5/2009	206	52.5	
Australia	1/11/2008	67	20.9	Total cost also includes Special Air Training Missiles (NATMs).
South Korea	1/11/2008	128	31.5	
Finland	4/23/2007	140	25.2	
Singapore	4/23/2007	56	16.1	Total cost also includes Special Air Training Missiles (NATMs).
Switzerland	4/23/2007		15.3	Quantity is classified. Congress notified of potential sale of up to 222 missiles. Contract value includes 5 NATM's.
Switzerland	12/12/2006		3.3	Quantity is classified.
Denmark	4/28/2006	2	0.5	
Turkey	2/22/2006	149	35.3	
Switzerland	12/8/2005		2.4	Quantity is classified
Switzerland	3/16/2005		2.2	Quantity is classified.
Denmark	3/10/2005	132	22.6	
Poland	11/18/2004	198	46.4	
South Korea	11/18/2004	41	9.9	
Switzerland	11/18/2004		17.6	Quantity is classified.
Switzerland	8/19/2004		1.7	Quantity is classified.
Finland	5/17/2004	3	0.5	
South Korea	3/2/2004	80	17.8	

# **Nuclear Cost**

None

# **Unit Cost**

# **Unit Cost Report**

	BY1997 \$M	BY1997 \$M	
Unit Cost	Current UCR Baseline (MAY 2010 APB)	Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2856.2	1322.0	
Quantity	10142	3142	
Unit Cost	0.282	0.421	+49.29 <sup>1</sup>
Average Procurement Unit Cost (APU)	•		
Cost	2232.7	775.3	
Quantity	10097	3097	
Unit Cost	0.221	0.250	+13.12
	BY1997 \$M	BY1997 \$M	
Unit Cost	Original UCR Baseline (JAN 1997 APB)	Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)	)		
Cost	2464.0	1322.0	
Quantity	10049	3142	
Unit Cost	0.245	0.421	+71.84 <sup>1</sup>
Average Procurement Unit Cost (APU)	C)		
Cost	1932.6	775.3	
Quantity	10000	3097	
Unit Cost	0.193	0.250	+29.53
		TY \$M	
Unit Cost	Current UCR Baseline (MAY 2010 APB)	Current Estimate (DEC 2011 SAR)	TY % Change
Program Acquisition Unit Cost (PAUC)		•	
Cost	3666.8	1472.8	
Unit Cost	0.362	0.469	+29.56
Average Procurement Unit Cost (APU)	C)		
Cost	3010.3	911.6	
Unit Cost	0.298	0.294	-1.34

	TY \$M					
Unit Cost	Original UCR Baseline (JAN 1997 APB)	Current Estimate (DEC 2011 SAR)	TY % Change			
Program Acquisition Unit Cost (PAUC)						
Cost	3232.9	1472.8				
Unit Cost	0.322	0.469	+45.65			
Average Procurement Unit Cost (APU)	C)					
Cost	2679.4	911.6				
Unit Cost	0.268	0.294	+9.70			

#### Nunn-McCurdy Breach

The AIM-9X Block I program will deviate from its current Acquisition Program Baseline (APB), dated May 8, 2010 for Average Procurement Unit Cost (APUC) and Program Acquisition Unit Cost (PAUC) metrics. This deviation results from truncating the Block I APB program of record production missile quantities from 10,097 to 3,097 based on direction from the United States Navy and United States Air Force requirements offices, which is based on the termination of future Block I production. If the Block I Program had not been truncated (to shift production to Block II via a separate APB), there would not have been a Nunn-McCurdy breach.

#### **Unit Cost Breach Data**

Changes from Previous SAR	\$M/Qty.	Percent
PAUC (BY \$M)	0.421	+45.17
APUC (BY \$M)	0.250	+10.13
PAUC Quantity	3142	0.00
PAUC (TY \$M)	0.469	+26.76
APUC (TY \$M)	0.294	-2.97
Initial SAR Information	BY \$M	TY \$M

**Program Acquisition Cost** 

#### **Unit Cost PAUC Changes**

The AIM-9X Block I program will deviate from its current APB, dated May 8, 2010 for APUC and PAUC metrics. This deviation results from truncating the Block I APB program of record production missile quantities from 10,097 to 3,097 based on direction from the United States Navy and United States Air Force requirements offices, which is based on the termination of future Block I production. If the Block I Program had not been truncated (to shift production to Block II via a separate APB), there would not have been a Nunn-McCurdy breach.

#### **Unit Cost APUC Changes**

The AIM-9X Block I program will deviate from its current APB, dated May 8, 2010 for APUC and PAUC metrics. This deviation results from truncating the Block I APB program of record production missile quantities from 10,097 to 3,097 based on direction from the United States Navy and United States Air Force requirements offices, which is based on the termination of future Block I production. If the Block I Program had not been truncated (to shift production to Block II via a separate APB), there would not have been a Nunn-McCurdy breach.

### **Unit Cost History**



		BY1997 \$M		TY	\$M
	Date	PAUC	APUC	PAUC	APUC
Original APB	JAN 1997	0.245	0.193	0.322	0.268
APB as of January 2006	AUG 2005	0.252	0.193	0.328	0.268
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	AUG 2005	0.252	0.193	0.328	0.268
Current APB	MAY 2010	0.282	0.221	0.362	0.298
Prior Annual SAR	DEC 2010	0.290	0.227	0.370	0.303
Current Estimate	DEC 2011	0.421	0.250	0.469	0.294

#### **SAR Unit Cost History**

### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial PAUC		PAUC							
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Prod Est
0.344	-0.031	0.000	0.014	0.020	-0.001	0.000	-0.024	-0.022	0.322

#### **Current SAR Baseline to Current Estimate (TY \$M)**

PAUC Changes									PAUC
Prod Est	Prod Est Econ Qty Sch Eng Est Oth Spt Total						Current Est		
0.322	-0.081	0.209	0.036	0.069	0.016	0.000	-0.102	0.147	0.469

### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial APUC	APUC								
Dev Est	Dev Est Econ Qty Sch Eng Est Oth Spt Total							Prod Est	
0.294	-0.030	0.000	0.012	0.015	0.001	0.000	-0.024	-0.026	0.268

#### **Current SAR Baseline to Current Estimate (TY \$M)**

APUC	APUC								
Prod Est	Prod Est Econ Qty Sch Eng Est Oth Spt Total							Current Est	
0.268	-0.078	0.092	0.028	0.022	0.065	0.000	-0.103	0.026	0.294

### **SAR Baseline History**

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	DEC 1994	DEC 1994	DEC 1994	DEC 1994
Milestone II	OCT 1996	OCT 1996	OCT 1996	DEC 1996
Milestone III	SEP 2002	MAR 2002	SEP 2003	MAY 2004
IOC	SEP 2003	AUG 2002	SEP 2003	NOV 2003
Total Cost (TY \$M)	695.0	3232.9	3232.9	1472.8
Total Quantity	N/A	10049	10049	3142
Prog. Acq. Unit Cost (PAUC)	N/A	0.322	0.322	0.469

### **Cost Variance**

# **Cost Variance Summary**

Summary Then Year \$M										
	RDT&E	Proc	MILCON	Total						
SAR Baseline (Prod Est)	553.5	2679.4		3232.9						
Previous Changes										
Economic	-14.9	-278.4		-293.3						
Quantity	-0.8	+20.3		+19.5						
Schedule	+25.8	+280.4		+306.2						
Engineering	+148.2	+227.7		+375.9						
Estimating	-18.6	+418.9		+400.3						
Other										
Support		-286.9		-286.9						
Subtotal	+139.7	+382.0		+521.7						
Current Changes										
Economic	+0.8	+36.9		+37.7						
Quantity		-1585.1		-1585.1						
Schedule		-194.1		-194.1						
Engineering		-158.2		-158.2						
Estimating	-132.8	-216.9		-349.7						
Other										
Support		-32.4		-32.4						
Subtotal	-132.0	-2149.8		-2281.8						
Total Changes	+7.7	-1767.8		-1760.1						
CE - Cost Variance	561.2	911.6		1472.8						
CE - Cost & Funding	561.2	911.6		1472.8						

Summary Base Year 1997 \$M											
	RDT&E	Proc	MILCON	Total							
SAR Baseline (Prod Est)	531.4	1932.6		2464.0							
Previous Changes											
Economic											
Quantity	-0.8	+13.7		+12.9							
Schedule	+21.6	+42.7		+64.3							
Engineering	+120.9	+176.6		+297.5							
Estimating	-21.7	+329.2		+307.5							
Other											
Support		-206.9		-206.9							
Subtotal	+120.0	+355.3		+475.3							
Current Changes											
Economic											
Quantity		-1082.8		-1082.8							
Schedule		-132.7		-132.7							
Engineering		-108.0		-108.0							
Estimating	-104.7	-167.0		-271.7							
Other											
Support		-22.1		-22.1							
Subtotal	-104.7	-1512.6		-1617.3							
Total Changes	+15.3	-1157.3		-1142.0							
CE - Cost Variance	546.7	775.3		1322.0							
CE - Cost & Funding	546.7	775.3		1322.0							

Previous Estimate: December 2010

RDT&E	\$N	1
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+0.8
Decrease to non-certify the continuation of the existing AIM-9X Block I program (Navy). (Estimating)	-34.5	-42.5
Decrease to non-certify the continuation of the existing AIM-9X Block I program (Air Force). (Estimating)	-70.0	-90.1
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
RDT&E Subtotal	-104.7	-132.0

Procurement	\$M		
	Base	Then	
Current Change Explanations	Year	Year	
Revised escalation indices. (Economic)	N/A	+36.9	
Total Quantity variance resulting from a decrease of 3648 missiles from 5000 to 1352 (Navy). (Subtotal)	-790.2	-1174.3	
Quantity variance resulting from a decrease of 3648 missiles from 5000 to 1352 (Navy). (Quantity)	(-562.2)	(-835.7)	
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-68.7)	(-102.1)	
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-55.9)	(-83.1)	
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-103.4)	(-153.4)	
Total Quantity variance resulting from a decrease of 3352 missiles from 5097 to 1745 (Air Force). (Subtotal)	-732.5	-1054.1	
Quantity variance resulting from a decrease of 3352 missiles from 5097 to 1745 (Air Force). (Quantity)	(-520.6)	(-749.4)	
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-64.0)	(-92.0)	
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-52.1)	(-75.1)	
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-95.8)	(-137.6)	
Increase to non-certify the continuation of the existing AIM-9X Block I program (Navy). (Estimating)	+58.0	+99.0	
Decrease to non-certify the continuation of the existing AIM-9X Block I program (Air Force). (Estimating)	-22.0	-20.5	
Adjustment for current and prior escalation. (Estimating)	-3.8	-4.4	
Adjustment for current and prior escalation. (Support)	+0.2	-0.2	
Decrease in Initial Spares due to AIM-9X Block I program ending FY 2010 instead of FY 2023 (Navy). (Support) (QR)	-7.4	-10.9	
Decrease in Initial Spares due to AIM-9X Block I program ending FY 2010 instead of FY 2022 (Air Force). (Support) (QR)	-14.9	-21.3	
Procurement Subtotal	-1512.6	-2149.8	

(QR) Quantity Related

#### Contracts

#### **Appropriation: Procurement**

Contract Name AIM-9X Lot 7

Contractor Raytheon Missile Systems

Contractor Location Tucson, AZ 85743

Contract Number, Type N00019-07-C-0008, FFP

Award Date December 12, 2006

Definitization Date December 12, 2006

Initial Cor	ntract Price (	(\$M)	Current C	ontract Price	(\$M)	Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
64.3	N/A	357	237.2	N/A	357	235.0	235.0	

#### **Cost And Schedule Variance Explanations**

Cost and Schedule variance reporting is not required on this FFP contract.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to FY 2009 modifications that added \$144.6M for FY 2007- FY 2010 Engineering Technical Support, FY 2007 - FY 2010 Logistics Support and Sustainment, FY 2007 - FY 2010 Software Maintenance and Operational Test for Block I. FY 2010 modifications added \$28.3M for Software Maintenance & Deficiency Corrections, Operational flight program, update test equipment, and non-warranty repairs. On June 30, 2011 an Acquisition Decision Memorandum reflected that the Navy will truncate the Block I program in order to establish a new program with a more capable missile. The revised Estimated Price At Completion from \$238.0M to \$235.0M reflects removal of Block II sunk costs.

This contract includes funds from Procurement, Research, Development, Test and Evaluation (RDT&E), and Operations and Maintenance. This contract includes Foreign Military Sales (FMS), but funding and quantities are not reflected in this section.

This contract is more than 90% complete; therefore, this is the final report for this contract.

#### Appropriation: Procurement

Contract Name
Contractor
Contractor Location
Contract Number, Type
Award Date

**Definitization Date** 

AIM-9X Lot 9, Lot 10
Raytheon Missile Systems
Tucson, AZ 85743
N00019-09-C-0061, FFP
June 15, 2009

June 15, 2009

Initial Cor	ntract Price	(\$M)	Current Contract Price (\$M)			t Price (\$M) Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
69.7	N/A	271	191.3	N/A	371	191.3	191.3	

#### **Cost And Schedule Variance Explanations**

Cost and Schedule variance reporting is not required on this FFP contract.

#### **Contract Comments**

The difference between the initial contract price target and the current contract price target is due to FY 2009 modifications to the contract, which added \$29.3M of funding to the contract for Proof of Manufacture/Design Test Missiles, Other Customer Requirements, and Production Transition for the Block II Missile.

FY 2010 modification added Lot 10 contract award of \$96.0M plus an additional \$15.9M modification for FY 2010 Block I System Improvement Program (SIP) and Domestic Spares. Initial contract price quantity changed from 271 to 371 adding Lot 10 missile quantity.

On June 30, 2011 an Acquisition Decision Memorandum reflected that the Navy will truncate the Block I program in order to establish a new program with a more capable missile. The revised Estimated Price At Completion from \$215.0M to \$191.3M reflects removal of Block II sunk costs.

On June 30, 2011 an Acquistion Decision Memorandum reflected that the Navy will truncate the Block I program in order to establish a new program with a more capable missile. The revised Estimated Price At Completion from \$215.0M to \$191.3M reflects removal of Block II sunk costs.

This contract includes Foreign Military Sales (FMS); however, funding and quantities are not reflected in this section.

This contract is more than 90% complete; therefore, this is the final report for this contract.

# **Deliveries and Expenditures**

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	45	45	45	100.00%
Production	2987	2987	3097	96.45%
Total Program Quantities Delivered	3032	3032	3142	96.50%

Expenditures and Appropriations (TY \$M)					
Total Acquisition Cost	1472.8	Years Appropriated	16		
Expenditures To Date	1440.2	Percent Years Appropriated	100.00%		
Percent Expended	97.79%	Appropriated to Date	1472.8		
Total Funding Years	16	Percent Appropriated	100.00%		

Deliveries and expenditures reflect data through January 31, 2012.

#### **Operating and Support Cost**

#### **Assumptions And Ground Rules**

The Operating and Support costs (O&S) are from a Program Office Estimate as of June 2011 as part of breaking out Block I from Block II program to support the Service Cost Position (SCP).

The estimate assumes 12 carriers (worst case) deployed per year (beginning in the third year of operations). Unit level consumption primarily relates to the annual training firings (Non Combat Expenditures Allowances (NCEA)) for the Navy and Weapon System Evaluation Program (WSEP) for the Air Force) and transportation cycle time of failed assets to and from the Depot. The cost estimate considers a 20-year service life for All-Up-Round (AUR) and a 13-year service life for the Captive Air Training Missile (CATM). The estimate spans a period of 29 years, beginning with FY 2003 and ending with FY 2032. FY 2003 to FY 2008, no missile repair costs were estimated due to warranty periods. Contractor support is required to repair AUR/CATM/container failures as a result of combat damage, catastrophic events, government misuse, abuse, or failure to exercise due diligence in testing, storing, or maintaining the warranted item in accordance with approved procedures and specifications. This cost includes the required repair for out of warranty missiles and containers, software support, and technical publication revisions. The sustaining support consists of systems engineering, and program management support and surveillance/quality/obsolescence evaluation program. Intermediate maintenance and indirect costs are as noted.

Military Personnel (MP) and disposal costs are not included.

The AIM-9M is the antecedent system to the AIM-9X. O&S costs for the AIM-9X are now paid up front with procurement dollars and are sent back to the manufacturer for repairs as warranted. This is different from the previous sectionalized maintenance with the AIM-9M. The AIM-9M data is from VAMOSC system which is for 22 years.

Costs BY1997 \$M				
Cost Element	AIM-9X BLOCK I Average Annual Cost for all Missiles	AIM-9M		
Unit-Level Manpower	0.00	0.00		
Unit Operations	4.52	7.98		
Maintenance	0.00	0.00		
Sustaining Support	9.09	4.46		
Continuing System Improvements	0.00	0.20		
Indirect Support	0.06	0.00		
Other	0.00	1.43		
Total Unitized Cost (Base Year 1997 \$)	13.67	14.07		

Total O&S Costs \$M	AIM-9X BLOCK I	AIM-9M
Base Year	420.3	130.5
Then Year	620.0	165.5

Last procurement of AIM-9X Block I tactical and CATM missiles is FY 2010. Sustainment period is FY 2003 to FY 2032.

The average annual cost is the total cost by cost element divided by number of years of estimate. This is the annual average cost per year for the program for all missiles which includes the both AURs and CATMs.